



NZ/QC/YPD/T&F-W3/2018-19/P4-BC1

Date: 17-05-2018

1. TEST REPORT ON BITUMINOUS MIXES :

(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for BC mix sample.

{Project*: **Package-4** 1. Improvement of road and 10th 11th 13th main roads at Judicial layout in ward no 04. 2. Improvement of road and drain at Sharadanagara in ward no.04. 3. Improvement of roads and drains balance main and cross roads of A sector in ward no 04.}

Report Required for: Assistant Executive Engineer,
Yelahanka Project Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri. Naveen Rao N (M/s Nischal Constructions)

TEST RESULTS

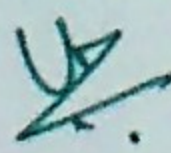
A. Type of Construction : Bituminous Concrete

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **5.43 %**

2. Gradation Test

TABLE 1.1

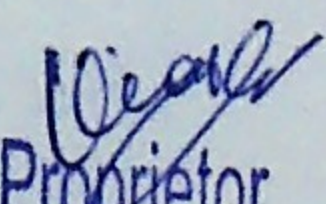
Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-17 of MORTH Specifications- 2013 BC (Grading - 2)
19.0	100	100
13.2	97.45	90-100
9.5	85.10	70-88
4.75	68.25	53-71
2.36	53.15	42-58
1.18	45.35	34-48
0.600	36.75	26-38
0.300	25.10	18-28
0.150	18.25	12-20
0.075	9.15	4-10



Page No. 1/1


KIRAN. R
M.E. (Civil-Engg)

For Newzen Consultants Bangalore


Proprietor



NZ/QC/YPD/T&F-W3/2018-19/P4-BS1

Date: 18-05-2018

1. TEST REPORT ON BITUMINOUS MIXES : (STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for BC mix sample.

{Project*: **Package-4** 1. Improvement of road and 10th 11th 13th main roads at Judicial layout in ward no 04. 2. Improvement of road and drain at Sharadanagara in ward no.04. 3. Improvement of roads and drains balance main and cross roads of A sector in ward no 04.}

Report Required for: Assistant Executive Engineer,
Yelahanka Project Division,
BBMP, Bangalore.

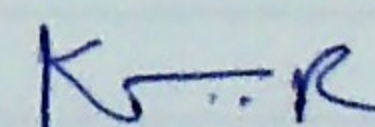
Name of the Agency/Contractor*: Sri. Naveen Rao N (M/s Nischal Constructions)

TEST RESULTS

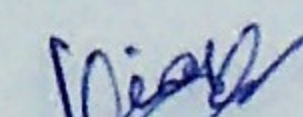
Table 1: Properties of BC (Gr-2) Mix

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Bituminous Concrete, Grade-2 as per M.o.R.T&H (V Revision)-2013 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	1355	900
2	Marshall Flow at 60°C, mm.	3.36	2.0 - 4.0

Page No. 1/1


KIRAN. R
M.E, (Civil-Engg)

For Newzen Consultants Bangalore


Proprietor



NZ/QC/YPD/T&F-W3/2018-19/P4-BC2

Date: 18-05-2018

1. TEST REPORT ON BITUMINOUS MIXES :

(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for BC mix sample.

{Project*: **Package-4** 1. Improvement of road and 10th 11th 13th main roads at Judicial layout in ward no 04. 2. Improvement of road and drain at Sharadanagara in ward no.04. 3. Improvement of roads and drains balance main and cross roads of A sector in ward no 04.}

Report Required for: Assistant Executive Engineer,
Yelahanka Project Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri. Naveen Rao N (M/s Nischal Constructions)

TEST RESULTS

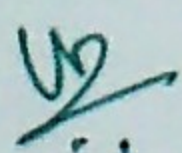
A. Type of Construction : Bituminous Concrete

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = 5.42 %

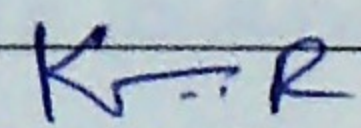
2. Gradation Test

TABLE 1.1

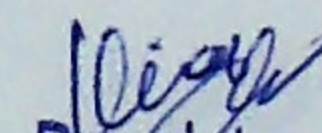
Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-17 of MORTH Specifications- 2013 BC (Grading - 2)
19.0	100	100
13.2	95.25	90-100
9.5	84.10	70-88
4.75	68.35	53-71
2.36	56.20	42-58
1.18	43.55	34-48
0.600	35.15	26-38
0.300	27.05	18-28
0.150	19.45	12-20
0.075	9.30	4-10



Page No. 1/1


KIRAN. R
M.E, (Civil-Engg)

For Newzen Consultants Bangalore


Proprietor



NZ/QC/YPD/T&F-W3/2018-19/P4-BS2

Date: 19-05-2018

1. TEST REPORT ON BITUMINOUS MIXES : (STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for BC mix sample.

{Project*: **Package-4** 1. Improvement of road and 10th 11th 13th main roads at Judicial layout in ward no 04. 2. Improvement of road and drain at Sharadanagara in ward no.04. 3. Improvement of roads and drains balance main and cross roads of A sector in ward no 04.}

Report Required for: Assistant Executive Engineer,
Yelahanka Project Division,
BBMP, Bangalore.

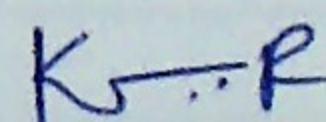
Name of the Agency/Contractor*: Sri. Naveen Rao N (M/s Nischal Constructions)

TEST RESULTS

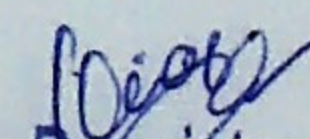
Table 1: Properties of BC (Gr-2) Mix

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Bituminous Concrete, Grade-2 as per M.o.R.T&H (V Revision)-2013 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	1386	900
2	Marshall Flow at 60°C, mm.	3.43	2.0 - 4.0

Page No. 1/1


KIRAN. R
M.E, (Civil-Engg)

For Newzen Consultants Bangalore


Proprietor



NZ/QC/YPD/T&F-W3/2018-19/P4-BC3

Date: 19-05-2018

1. TEST REPORT ON BITUMINOUS MIXES :**(BITUMEN EXTRACTION TEST & GRADATION TEST)****Sub:** To determine the percentage of bitumen and gradation for BC mix sample.**{Project*: Package-4** 1. Improvement of road and 10th 11th 13th main roads at Judicial layout in ward no 04. 2. Improvement of road and drain at Sharadanagara in ward no.04.
3. Improvement of roads and drains balance main and cross roads of A sector in ward no 04.}Report Required for: Assistant Executive Engineer,
Yelahanka Project Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri. Naveen Rao N (M/s Nischal Constructions)

TEST RESULTS**A. Type of Construction : Bituminous Concrete**1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **5.44 %****2. Gradation Test****TABLE 1.1**

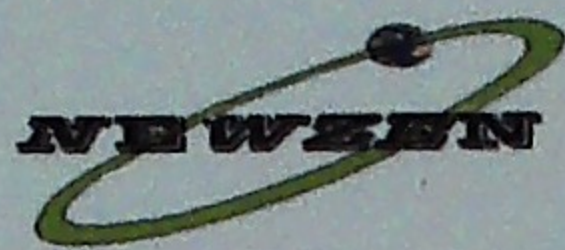
Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-17 of MORTH Specifications- 2013 BC (Grading - 2)
19.0	100	100
13.2	98.25	90-100
9.5	85.15	70-88
4.75	69.45	53-71
2.36	56.80	42-58
1.18	47.25	34-48
0.600	33.05	26-38
0.300	25.10	18-28
0.150	18.60	12-20
0.075	8.75	4-10

Page No. 1/1

KIRAN. R
M.E, (Civil-Engg)

For Newzen Consultants Bangalore

Proprietor



NZ/QC/YPD/T&F-W3/2018-19/P4-BS3

Date: 21-05-2018

1. TEST REPORT ON BITUMINOUS MIXES :
(STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for BC mix sample.

{Project*: **Package-4** 1. Improvement of road and 10th 11th 13th main roads at Judicial layout in ward no 04. 2. Improvement of road and drain at Sharadanagara in ward no.04. 3. Improvement of roads and drains balance main and cross roads of A sector in ward no 04.}

Report Required for: Assistant Executive Engineer,
Yelahanka Project Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri. Naveen Rao N (M/s Nischal Constructions)

TEST RESULTS

Table 1: Properties of BC (Gr-2) Mix

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Bituminous Concrete, Grade-2 as per M.o.R.T&H (V Revision)-2013 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	1375	900
2	Marshall Flow at 60°C, mm.	3.38	2.0 - 4.0

Page No. 1/1

K. R.
KIRAN. R
M.E. (Civil-Engg)

For Newzen Consultants Bangalore

Proprietor



NZ/QC/YPD/T&F-W3/2018-19/P4-BC4

Date: 21-05-2018

1. TEST REPORT ON BITUMINOUS MIXES :

(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for BC mix sample.

{Project*: **Package-4** 1. Improvement of road and 10th 11th 13th main roads at Judicial layout in ward no 04. 2. Improvement of road and drain at Sharadanagara in ward no.04.
3. Improvement of roads and drains balance main and cross roads of A sector in ward no 04.}

Report Required for: Assistant Executive Engineer,
Yelahanka Project Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri. Naveen Rao N (M/s Nischal Constructions)

TEST RESULTS

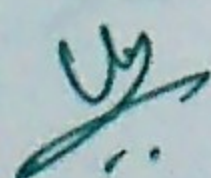
A. Type of Construction : Bituminous Concrete

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **5.41 %**

2. Gradation Test

TABLE 1.1

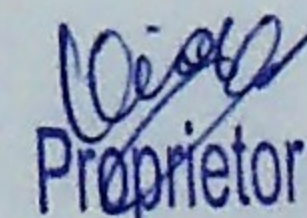
Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-17 of MORTH Specifications- 2013 BC (Grading - 2)
19.0	100	100
13.2	97.45	90-100
9.5	85.50	70-88
4.75	67.35	53-71
2.36	54.00	42-58
1.18	47.65	34-48
0.600	35.10	26-38
0.300	23.55	18-28
0.150	18.25	12-20
0.075	8.75	4-10



Page No. 1/1

KIRAN. R
M.E. (Civil-Engg)

For Newzen Consultants Bangalore


Proprietor



NZ/QC/YPD/T&F-W3/2018-19/P4-BS4

Date: 22-05-2018

1. TEST REPORT ON BITUMINOUS MIXES : (STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for BC mix sample.

{Project*: **Package-4** 1. Improvement of road and 10th 11th 13th main roads at Judicial layout in ward no 04. 2. Improvement of road and drain at Sharadanagara in ward no.04. 3. Improvement of roads and drains balance main and cross roads of A sector in ward no 04.}

Report Required for: Assistant Executive Engineer,
Yelahanka Project Division,
BBMP, Bangalore.

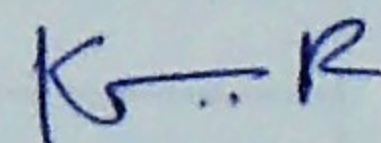
Name of the Agency/Contractor*: Sri. Naveen Rao N (M/s Nischal Constructions)

TEST RESULTS

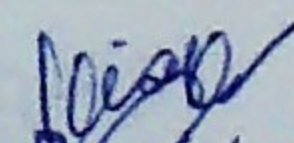
Table 1: Properties of BC (Gr-2) Mix

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Bituminous Concrete, Grade-2 as per M.o.R.T&H (V Revision)-2013 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	1389	900
2	Marshall Flow at 60°C, mm.	3.56	2.0 - 4.0

Page No. 1/1


KIRAN. R
M.E, (Civil-Engg)

For Newzen Consultants Bangalore


Proprietor



NZ/QC/YPD/T&F-W3/2018-19/P4-BC5

Date: 22-05-2018

1. TEST REPORT ON BITUMINOUS MIXES :

(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for BC mix sample.

{Project*: **Package-4** 1. Improvement of road and 10th 11th 13th main roads at Judicial layout in ward no 04. 2.Improvement of road and drain at Sharadanagara in ward no.04. 3.Improvement of roads and drains balance main and cross roads of A sector in ward no 04.}

Report Required for: Assistant Executive Engineer,
Yelahanka Project Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri. Naveen Rao N (M/s Nischal Constructions)

TEST RESULTS

A. Type of Construction : Bituminous Concrete

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = 5.43 %

2. Gradation Test

TABLE 1.1

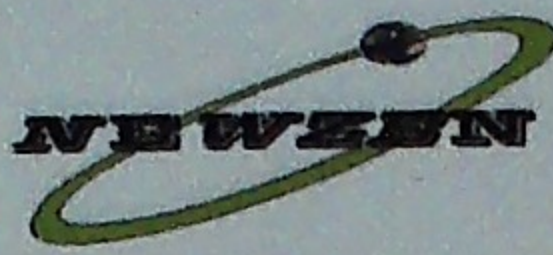
Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-17 of MORTH Specifications- 2013 BC (Grading - 2)
19.0	100	100
13.2	97.15	90-100
9.5	86.35	70-88
4.75	69.45	53-71
2.36	56.80	42-58
1.18	44.05	34-48
0.600	31.90	26-38
0.300	27.30	18-28
0.150	17.65	12-20
0.075	9.10	4-10

Page No. 1/1

K. R.
KIRAN. R
M.E, (Civil-Engg)

For Newzen Consultants Bangalore

Proprietor



NZ/QC/YPD/T&F-W3/2018-19/P4-BS5

Date: 23-05-2018

1. TEST REPORT ON BITUMINOUS MIXES :
(STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for BC mix sample.

{Project*: **Package-4** 1. Improvement of road and 10th 11th 13th main roads at Judicial layout in ward no 04. 2. Improvement of road and drain at Sharadanagara in ward no.04. 3. Improvement of roads and drains balance main and cross roads of A sector in ward no 04.}

Report Required for: Assistant Executive Engineer,
Yelahanka Project Division,
BBMP, Bangalore.

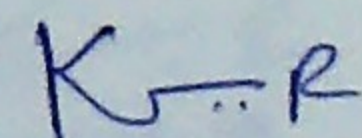
Name of the Agency/Contractor*: Sri. Naveen Rao N (M/s Nischal Constructions)

TEST RESULTS

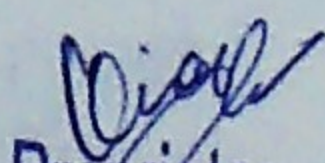
Table 1: Properties of BC (Gr-2) Mix

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Bituminous Concrete, Grade-2 as per M.o.R.T&H (V Revision)-2013 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	1372	900
2	Marshall Flow at 60°C, mm.	3.45	2.0 - 4.0

Page No. 1/1


KIRAN. R
M.E, (Civil-Engg)

For Newzen Consultants Bangalore


Proprietor



NZ/QC/YPD/T&F-W3/2018-19/P4-CB2

Date: 21-05-2018

1. TEST REPORT ON COARSE AGGREGATE:

Sub: Testing of Coarse Aggregate used in Bituminous Concrete.

{Project*: **Package-4** 1. Improvement of road and 10th 11th 13th main roads at Judicial layout in ward no 04. 2.Improvement of road and drain at Sharadanagara in ward no.04. 3.Improvement of roads and drains balance main and cross roads of A sector in ward no 04.}

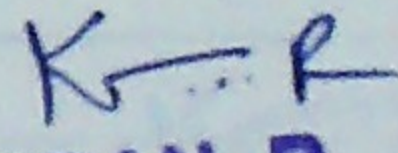
Report Required for: Assistant Executive Engineer,
Yelahanka Project Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri. Naveen Rao N (M/s Nischal Constructions)

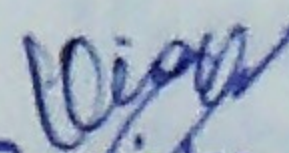
TABLE 1.1 ;

SL No	Test conducted	Test Results	Tests Conforms to IS 2386(Part I to IV)- 1963 (Reaffirmed on 2002) & Requirements as per IS:383-1970 & M.o.R.T.H Specification, V Revision -2013.
1.	Aggregate Impact Value	23.26 %	Not more than 24.00 %
2.	Combined Flakiness and Elongation index, %	25.21 %	Not more than 35.0 %
3.	Water absorption, %	0.38 %	Not more than 2.0 %
4.	Specific gravity	2.61	-----
5.	Soundness	6.55 %	Max. 12 % in Sodium Sulphate

Page No. 1/1,


KIRAN. R
M.E. (Civil-Engg)

For Newzen Consultants Bangalore


Proprietor



NZ/QC/YPD/T&F-W3/2018-19/P4-BC6

Date: 24-05-2018

1. TEST REPORT ON BITUMINOUS MIXES :

(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for BC mix sample.

{Project*: **Package-4** 1. Improvement of road and 10th 11th 13th main roads at Judicial layout in ward no 04. 2. Improvement of road and drain at Sharadanagara in ward no.04. 3. Improvement of roads and drains balance main and cross roads of A sector in ward no 04.}

Report Required for: Assistant Executive Engineer,
Yelahanka Project Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri. Naveen Rao N (M/s Nischal Constructions)

TEST RESULTS

A. Type of Construction : Bituminous Concrete

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = 5.42 %

2. Gradation Test

TABLE 1.1

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-17 of MORTH Specifications- 2013 BC (Grading - 2)
19.0	100	100
13.2	95.65	90-100
9.5	84.45	70-88
4.75	68.25	53-71
2.36	55.10	42-58
1.18	47.30	34-48
0.600	34.60	26-38
0.300	23.05	18-28
0.150	19.35	12-20
0.075	9.45	4-10

KIRAN. R
M.E, (Civil-Engg)

Page No. 1/1

For Newzen Consultants Bangalore

Proprietor



NZ/QC/YPD/T&F-W3/2018-19/P4-BS6

Date: 25-05-2018

1. TEST REPORT ON BITUMINOUS MIXES :
(STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for BC mix sample.

{Project*: **Package-4** 1. Improvement of road and 10th 11th 13th main roads at Judicial layout in ward no 04. 2. Improvement of road and drain at Sharadanagara in ward no.04. 3. Improvement of roads and drains balance main and cross roads of A sector in ward no 04.}

Report Required for: Assistant Executive Engineer,
Yelahanka Project Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri. Naveen Rao N (M/s Nischal Constructions)

TEST RESULTS

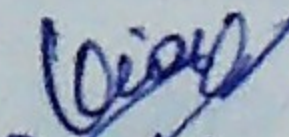
Table 1: Properties of BC (Gr-2) Mix

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Bituminous Concrete, Grade-2 as per M.o.R.T&H (V Revision)-2013 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	1379	900
2	Marshall Flow at 60°C, mm.	3.37	2.0 - 4.0

Page No. 1/1


KIRAN. R
M.E, (Civil-Engg)

For Newzen Consultants Bangalore


Proprietor



NZ/QC/YPD/T&F-W3/2018-19/P4-BC7

Date: 25-05-2018

1. TEST REPORT ON BITUMINOUS MIXES :

(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for BC mix sample.

{Project*: **Package-4** 1. Improvement of road and 10th 11th 13th main roads at Judicial layout in ward no 04. 2. Improvement of road and drain at Sharadanagara in ward no.04. 3. Improvement of roads and drains balance main and cross roads of A sector in ward no 04.}

Report Required for: Assistant Executive Engineer,
Yelahanka Project Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri. Naveen Rao N (M/s Nischal Constructions)

TEST RESULTS

A. Type of Construction : Bituminous Concrete

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **5.44 %**

2. Gradation Test

TABLE 1.1

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-17 of MORTH Specifications- 2013 BC (Grading - 2)
19.0	100	100
13.2	98.45	90-100
9.5	85.15	70-88
4.75	67.25	53-71
2.36	56.25	42-58
1.18	44.05	34-48
0.600	36.20	26-38
0.300	23.05	18-28
0.150	17.35	12-20
0.075	8.75	4-10

KIRAN. R
M.E, (Civil-Engg)

Page No. 1/1

For Newzen Consultants Bangalore

Proprietor



NZ/QC/YPD/T&F-W3/2018-19/P4-BS7

Date: 26-05-2018

1. TEST REPORT ON BITUMINOUS MIXES :
(STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for BC mix sample.

{Project*: **Package-4** 1. Improvement of road and 10th 11th 13th main roads at Judicial layout in ward no 04. 2. Improvement of road and drain at Sharadanagara in ward no.04. 3. Improvement of roads and drains balance main and cross roads of A sector in ward no 04.}

Report Required for: Assistant Executive Engineer,
Yelahanka Project Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri. Naveen Rao N (M/s Nischal Constructions)

TEST RESULTS

Table 1: Properties of BC (Gr-2) Mix

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Bituminous Concrete, Grade-2 as per M.o.R.T&H (V Revision)-2013 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	1375	900
2	Marshall Flow at 60°C, mm.	3.42	2.0 - 4.0

Page No. 1/1

[Handwritten signature]

[Handwritten signature: K. R.]
KIRAN. R
M.E, (Civil-Engg)

For Newzen Consultants Bangalore

[Handwritten signature]
Proprietor